NCP Concept Member: NCPUSAGE

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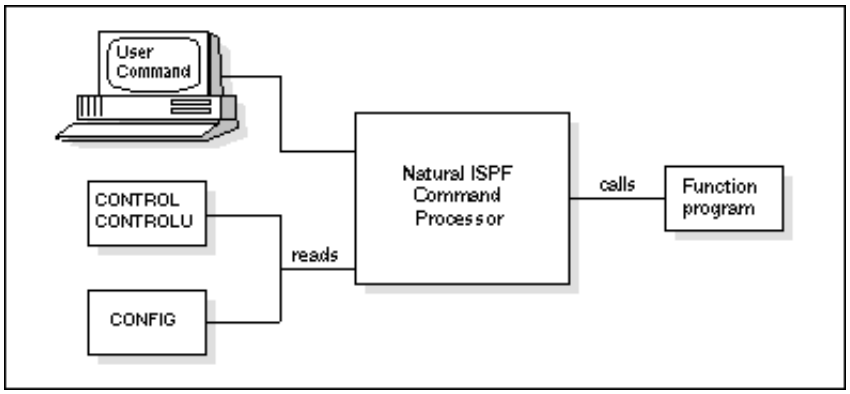
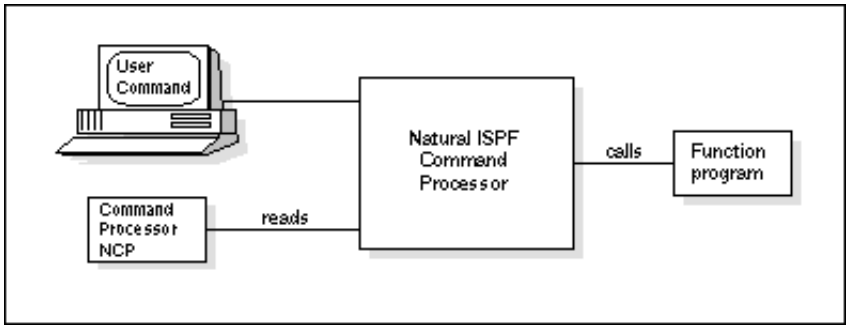
Usually Natural ISPF offers commands/functions and objects for several subsystems such as OS/390, VSE/ESA or BS2000/OSD. Depending on the installation, only a comparatively small subset of all functions is activated (with the subsystem definitions in the CONFIG member). The Natural ISPF command processor has to interpret the command entered on the screen by reading the whole CONTROL table, which contains commands, functions and objects and by tailoring this table with information from the CONFIG member.

The following figure illustrates Natural ISPF command processing:



All tables are stored in a database and are read during processing.

This overhead can be reduced by using a command processor (NCP) as illustrated below:



The command processor replaces CONFIG and the CONTROL member(s) and is stored in the Natural buffer pool improving performance of Natural ISPF command processing.

When using an NCP, which can be considered as a compiled object of the CONTROL and CONFIG tables, changes to the Natural ISPF table sources are not effective until the NCP is regenerated. For this reason the NCP should be used in stable environments, where changes to the Natural ISPF tables are infrequent.

The following changes in CONFIG affect the NCP:

- Activating/deactivating a subsystem
- Activating/deactivating object exits

In addition, any change to the Site Control Table CONTROLU affects the NCP. *****

After installation of a new Natural ISPF release or maintenance level, the NCP must be regenerated to reflect changes in tables delivered by Software AG.

***** For a detailed description of the Site Control Table, see the subsection Defining a User Object in Section Open NSPF of the Natural ISPF Programmer's Guide.

How to Generate an NCP Object for Natural ISPF

To generate an NCP (which is an option) enter the command GENNCP or select the NCP option from the Configuration Menu. The following window opens:

```
---------------------------- CONFIGURATION MENU -------------------------------
   OPTION  ===> 4
                                                                 Userid   BRY
              +-----Generation of NCP processor-----+            Time     14:03:46
      1    N-I !                                    !            Terminal DAEFTC45
              ! Enter processor name    :  A        !            Library  NSPFHELP
      2    CON !                                    !            Node     148
      3    CON ! Select one/more functions           !
              !  Generate and compile    :          !
      4    NCP !  Compile only           :          !
              !  Copy processor to SYSLIB:          !
              !  Generate report         :          !
              !                                     !
              +-------------------------------------+
```

Field	Meaning
Enter processor name	Instead of overwriting an existing NCP, you can create a new one whenever necessary. Enter a 1-byte name (**x**) and the generated NCP is stored in the library SYSISPFU with the name IS-NCP-x.
Generate and compile	With the current contents of the Natural ISPF tables, an NCP source is generated and compiled to create an object in SYSISPFU.
Compile only	Mark this option if the generation of a previous execution was successful but the compilation failed.
Copy processor to SYSLIB	When a compiled NCP object exists in SYSISPFU, it must be copied to SYSLIB before it can be activated.
Generate report	Mark this option to perform a report, during generation, containing a log of functions. The report will then be written to the Natural ISPF workpool.

Activating a Specific NCP Object

A compiled NCP object that has been copied to the library SYSLIB and that follows the naming pattern IS-NCP-x can subsequently be activated by selecting the N-ISPF (parameters) option from the Configuration Menu and assigning the name suffix **x** to the field PROCESSOR ID.

Runtime Considerations When Using NCP

If a NAT0888 occurs with NCP, increase the Natural parameter DATSIZE. If the defined NCP cannot be used by Natural ISPF (defined processor deleted or not accessible), an error message is displayed and Natural ISPF automatically invokes its standard command processing logic without NCP. A defined NCP can be deactivated by

resetting its name in the NSPF Parameters screen.

Predefined Command Processors

With Natural ISPF, the following command processors are loaded to SYSLIB and can be used if no user-defined objects and commands are defined and no user exits are to be activated.

Name	Supported subsystems
IS-NCP-N	Natural, Incore database
IS-NCP-M	Natural, Incore database, OS/390
IS-NCP-P	Natural, Incore database, OS/390, PANVALET
IS-NCP-L	Natural, Incore database, OS/390, CA-LIBRARIAN
IS-NCP-D	Natural, Incore database, VSE/ESA
IS-NCP-B	Natural, Incore database, BS2000/OSD
IS-NCP-A	Natural, Incore database, OS/390, VSE/ESA, BS2000/OSD, PANVALET, CA-LIBRARIAN

